K16U 2053

Reg. No. : .....

Name : .....

III Semester B.B.A./B.B.A.T.T.M./B.B.A.R.T.M./B.B.M. Degree (CBCSS – Reg./Supple./Imp.) Examination, November 2016
(2014 Admn. Onwards)
GENERAL COURSE FOR B.B.A./B.B.A.T.T.M./B.B.A.R.T.M./B.B.M. 3 A 11 B.B.M./3 A 12 B.B.A. (RTM)/B.B.A./B.B.A.(T.T.M.) : Numerical Skills

Time : 3 Hours

Max. Marks : 40

SECTION – A

Answer the **4** questions. **Each** question carries ½ marks.

1. Write down any one form of DeMorgan's law.
2. Show a null set is represented.
3. Write the formulae to find the n^{th} term of an A.P.
4. Find the number of elements in the Matrix A of order m × n.

(½×4=2)

SECTION – B

Answer **any four** questions. **Each** question carries **1** mark.

5. What is present value ?
6. Find the roots of $x^2 - 1 = 0$.
7. Define a Venn Diagram.
8. Write the arithmetic mean and geometric mean between two numbers a and b.
9. What do you mean by disjoint sets ?
10. Define column matrix.

(4×1=4)

P.T.O.

SECTION – C

Answer **any six** questions. **Each** question carries **3** marks.

11. Using the sets A = {4, 5, 7}, B = {5, 7, 8}, C = {7, 8, 9}. Verify that $A - (B \cup C) = (A - B) \cap (A - C)$.

12. Find the total interest and amount at the end of 5^{th} year for 8,500 at 12% p.a. simple interest.

13. Solve $\frac{x-2}{3} + \frac{4}{x-3} = 3$.

14. Find the sum of first 'n' natural numbers.

15. 'A' is six times as old as 'B'. Fifteen years later, 'A' will be three times old as 'B'. Find the ages of 'A' and 'B'.

16. Solve $x^2 + 10x + 21 = 0$ by factorisation method.

17. Given the series 2, 6, 18, 54,.....
Find (i) 12^{th} term (ii) n^{th} term.

18. If $A = \begin{bmatrix} 3 & 5 & 7 \\ 2 & -3 & 1 \\ 1 & 1 & 2 \end{bmatrix}$, Find A^{-1}. **(6×3=18)**

SECTION – D

Answer **any two** questions. **Each** question carries **8** marks.

19. In a school of fine arts 150 students are dancers and 98 students are singers. If 63 students are both dancers and singers. Find out the total number of students in the school.

20. A man saves Rs. 32 during the first year, Rs. 36 in the next year, Rs. 40 in the third year. If he continues his savings in this sequence, in how many years he save Rs. 2,000 ?

21. Given that $A + B = \begin{bmatrix} 2 & 1 \\ 4 & 5 \end{bmatrix}$ and $A - B = \begin{bmatrix} 6 & 5 \\ 10 & 7 \end{bmatrix}$, Find

i) A ii) B iii) A^2 iv) B^2 v) $A^2 - B^2$ **(2×8=16)**